

REMARKS

Independent claims 1, 15 and 16 are amended to clarify the association of the plurality of bit maps with portions of the file. Example embodiments are shown in FIGs. 1 and 2 and is described in the specification at p. 4, l. 28 and p. 6, l. 4.

Claims 1-21 remain for consideration, and reconsideration and allowance of the application are respectfully requested.

The Office Action fails to establish that claims 1-21 are unpatentable under 35 USC §101 as claiming non-statutory subject matter. The rejection is respectfully traversed because the Office Action does not establish a *prima facie* case that the invention as a whole is directed solely to an abstract idea or to manipulation of abstract ideas or does not produce a useful result. The MPEP at §2106 II. A. provides the following guidance:

Although the courts have yet to define the terms useful, concrete, and tangible in the context of the practical application requirement for purposes of these guidelines, the following examples illustrate claimed inventions that have a practical application because they produce useful, concrete, and tangible result:

- Claims drawn to a long-distance telephone billing process containing mathematical algorithms were held to be directed to patentable subject matter because "the claimed process applies the Boolean principle to produce a useful, concrete, tangible result without pre-empting other uses of the mathematical principle." *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed. Cir. 1999);

- "[T]ransformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' -- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601; and

- Claims drawn to a rasterizer for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means were held to be directed to patentable subject matter since the claims defined "a specific machine to produce a useful, concrete, and tangible result." *In re Alappat*, 33 F.3d 1526, 1544, 31 USPQ2d 1545, 1557 (Fed. Cir. 1994).

A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354,

1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459. Office personnel have the burden to establish a *prima facie* case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101. Compare *Musgrave*, 431 F.2d at 893, 167 USPQ at 289; *In re Foster*, 438 F.2d 1011, 1013, 169 USPQ 99, 101 (CCPA 1971). Further, when such a rejection is made, Office personnel must expressly state how the language of the claims has been interpreted to support the rejection.

Based on the direction provided by the MPEP, the Office Action fails to present any evidence to show that claims 1-21 do not produce a useful, concrete, and tangible result.

Claim 1 recites copying of control structures and updating pointers in a computer implemented method, which are clearly useful for expanding usable space of a data file. Claim 15 is an apparatus claim in means-plus function format and includes functional limitations similar to the functions of claim 1. Since a means-plus-function claim must be interpreted in light of the structure set forth in the specification and the specification clearly sets forth structure recognized by those skilled in the art to perform the functions (e.g., p. 4, l. 3; p. 5, l. 10; and p. 12, l. 12) claim 15 is clearly directed to statutory subject matter. Claim 16 is Beauregard-style claim that claims a computer-readable medium configured with instructions for performing specific steps, and Beauregard-style claims are well understood to be directed to statutory subject matter. Method claim 7 and apparatus claim 14 clearly produce tangible and useful results as the Office Action admits. It is contrary to present law that output or display to a user is required to satisfy the requirements for statutory subject matter. One need look no further than the patents cited by the Examiner to find claims that neither output nor display data to a user and which have been granted by the Patent Office. Therefore, the rejection is unfounded and should be withdrawn.

The Office Action fails to establish that claims 1-6 and 14-21 are unpatentable under 35 U.S.C. 103(a) over "Loaiza" ("U.S. Patent No. 6,549,901 to Loaiza et al.) in view of "Bailey" (U.S. Patent Pub. No. 2004/0243535 to Bailey). The rejection is

respectfully traversed because the Office Action fails to show that all the limitations are suggested by the references and fails to provide a proper motivation for modifying the teachings of Loaiza with teachings of Bailey.

The cited teachings of Loaiza neither teach nor suggest the limitations of maintaining in a control file first and second control structures and first and second pointers to the first and second control structures, wherein the first structure includes a plurality of pointers that respectively reference a plurality of bit maps that indicate available and allocated records of respective portions of usable space in the data file, and the second structure contains respective values that indicate quantities of available space in the respective portions of the data file. These limitations are found in independent claims 1, 15, and 16.

Loaiza's table space 130 includes multiple data files. There is no apparent suggestion or indication of a control file with a structure that contains respective values that indicate quantities of available space in the respective portions of the data file. The cited teachings of Loaiza [c7, l 44-47; c8, l 35-42, and FIG. 5 make no mention of respective values for respective portions of the data file. Furthermore, the values shown in Loaiza's FIG. 5 do not indicate quantities of available space. Loaiza's numbers appear to be identifier numbers, not quantity values. Thus, Loaiza is not shown to suggest the limitations of a control file with a structure that contains respective values that indicate quantities of available space in the respective portions of the data file.

Bailey is also not shown to suggest the limitations of a plurality of pointers that respectively reference a plurality of bit maps that indicate available and allocated records of respective portions of usable space in the data file. The cited portions of Bailey ([0029]-[0031]) clearly teach only a single bitmap. Furthermore, there is no plurality of pointers to the plurality of bitmaps as claimed. Thus, Bailey is not shown to suggest the claimed plurality of pointers to a plurality of bitmaps.

Loaiza is also not shown to suggest the claimed allocating, copying, and updating. All three steps refer to operations performed in the same control file. The applied teachings of Loaiza, however, appear to operate in separate data files (FIG. 5A). Furthermore, Loaiza shows a control file 242 (FIG. 5A), but there is no apparent

allocating within that control file, copying within that control file, and further updating within that control file. Therefore, these limitations are not shown to be suggested by Loaiza.

The alleged motivation for modifying Loaiza with Bailey is unsupported by evidence and improper. The alleged motivation simply states functions provided by Bailey without providing evidence that Loaiza has any particular deficiency or reason to change its mode of operation. Therefore, the alleged motivation is improper.

Claims 2-6, 14, and 17-21 include further limitations that further detail the limitations of the base claims. Therefore, the limitations of claims 1-6 and 14-21 are not shown to be suggested by the Loaiza-Bailey combination for at least the reasons set forth above. The rejection of claims 1-6 and 14-21 over the Loaiza-Bailey combination should be withdrawn because a *prima facie* case of obviousness has not been established.

The Office Action fails to establish that claims 7-13 are unpatentable under 35 U.S.C. 103(a) over "Anfindsen" ("U.S. Patent No. 6,751,617 to Anfindsen) in view of Loaiza. The rejection is respectfully traversed because the Office Action fails to show that all the limitations are suggested by the references and fails to provide a proper motivation for modifying the teachings of Anfindsen with teachings of Loaiza.

The current Office Action apparently only responded to Applicants' arguments that the previous Office Action did not provide evidence of a motivation to modify Anfindsen with teachings of Loaiza and did not respond to Applicants arguments that the cited teachings of Anfindsen do not suggest the claim limitations. Therefore, the arguments presented in Applicants' response dated June 6, 2006, are repeated herein.

The cited teachings of the Anfindsen-Loaiza combination neither teach nor suggest the limitations of a control file including a first structure that contains pointers to second and third structures in the control file, wherein the second structure includes a plurality of pointers that respectively reference bit maps of the cells of the application file, each bit map indicating available and allocated records in the cell, and the third structure containing respective values that indicate quantities of available space in the cells (claims 7 and 14).

It is not apparent what elements of Anfindsen are construed to correspond to the claimed bit maps. The term "bitmap" is taught by Anfindsen for use in indicating read parameters of a lock control block and for use as representing write parameters in a lock control block (col. 5, l. 38-49). The cited teachings contain no apparent and relevant suggestion of bitmaps used to indicate available and allocated records in the cells. Therefore, the Office Action fails to show that Anfindsen teaches or suggests bit maps that indicate available and allocated portions of usable space in the data file.

Similarly, the cited sections of Anfindsen contain no elements that appear to be relevant to the claimed third structure with the values that indicate quantities of available space in the cells.

The limitations also clearly indicate that the control file includes pointers to the second and third structures in the control file. Since the Office Action does not clearly indicate which elements of Anfindsen are construed to correspond to the claimed bit maps, and the teachings of Anfindsen do not appear to be relevant, the limitations of the pointers to the second and third structures are not shown to be suggested.


If the rejection is maintained, clarification is respectfully requested. Specifically, recitation of those specific elements of Anfindsen and Loaiza that are construed as corresponding to the claim limitations is requested.

Independent claims 7 and 14 include the limitations discussed above, and claims 8-13 include further limitations that further detail the limitations of the base claims. Therefore, the limitations of claims 7-14 are not shown to be suggested by the Anfindsen-Loaiza combination for at least the reasons set forth above. Furthermore, the alleged motivation for combining Loaiza with Anfindsen is conclusory and improper. The rejection of claims 7-14 Anfindsen-Loaiza combination should be withdrawn because a *prima facie* case of obviousness has not been established.

Withdrawal of the rejections and reconsideration of the claims are respectfully requested in view of the remarks set forth above. No extension of time is believed to be necessary for consideration of this response. However, if an extension of time is required, please consider this a petition for a sufficient number of months for consideration of this response. If there are any additional fees in connection with this response, please charge Deposit Account No. 50-0996 (USYS.069PA).

Respectfully submitted,

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